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APPLICATION NO.	FILING DATE	FIRST NAMED INVENTOR	ATTORNEY DOCKET NO.	CONFIRMATION NO.
10/090,637	03/06/2002	Yukimasa Sugino	0054-0253P	6063
2292	7590	06/24/2005	EXAMINER	
BIRCH STEWART KOLASCH & BIRCH PO BOX 747 FALLS CHURCH, VA 22040-0747			TRAN, KHANH C	
			ART UNIT	PAPER NUMBER
			2631	

DATE MAILED: 06/24/2005

Please find below and/or attached an Office communication concerning this application or proceeding.

<b>Office Action Summary</b>	<b>Application No.</b> 10/090,637	<b>Applicant(s)</b> SUGINO, YUKIMASA	
	<b>Examiner</b> Khanh Tran	<b>Art Unit</b> 2631	

-- The MAILING DATE of this communication appears on the cover sheet with the correspondence address --

#### Period for Reply

A SHORTENED STATUTORY PERIOD FOR REPLY IS SET TO EXPIRE 3 MONTH(S) FROM THE MAILING DATE OF THIS COMMUNICATION.

- Extensions of time may be available under the provisions of 37 CFR 1.136(a). In no event, however, may a reply be timely filed after SIX (6) MONTHS from the mailing date of this communication.
- If the period for reply specified above is less than thirty (30) days, a reply within the statutory minimum of thirty (30) days will be considered timely.
- If NO period for reply is specified above, the maximum statutory period will apply and will expire SIX (6) MONTHS from the mailing date of this communication.
- Failure to reply within the set or extended period for reply will, by statute, cause the application to become ABANDONED (35 U.S.C. § 133). Any reply received by the Office later than three months after the mailing date of this communication, even if timely filed, may reduce any earned patent term adjustment. See 37 CFR 1.704(b).

#### Status

- 1) ☒ Responsive to communication(s) filed on 06 March 2002.
- 2a) ☐ This action is **FINAL**.                      2b) ☒ This action is non-final.
- 3) ☐ Since this application is in condition for allowance except for formal matters, prosecution as to the merits is closed in accordance with the practice under *Ex parte Quayle*, 1935 C.D. 11, 453 O.G. 213.

#### Disposition of Claims

- 4) ☒ Claim(s) 1-23 is/are pending in the application.
- 4a) Of the above claim(s) \_\_\_\_\_ is/are withdrawn from consideration.
- 5) ☒ Claim(s) 14-22 is/are allowed.
- 6) ☒ Claim(s) 1-6, 13 and 23 is/are rejected.
- 7) ☒ Claim(s) 7-12 is/are objected to.
- 8) ☐ Claim(s) \_\_\_\_\_ are subject to restriction and/or election requirement.

#### Application Papers

- 9) ☐ The specification is objected to by the Examiner.
- 10) ☐ The drawing(s) filed on \_\_\_\_\_ is/are: a) ☐ accepted or b) ☐ objected to by the Examiner.  
Applicant may not request that any objection to the drawing(s) be held in abeyance. See 37 CFR 1.85(a).  
Replacement drawing sheet(s) including the correction is required if the drawing(s) is objected to. See 37 CFR 1.121(d).
- 11) ☐ The oath or declaration is objected to by the Examiner. Note the attached Office Action or form PTO-152.

#### Priority under 35 U.S.C. § 119

- 12) ☒ Acknowledgment is made of a claim for foreign priority under 35 U.S.C. § 119(a)-(d) or (f).
- a) ☒ All    b) ☐ Some \*    c) ☐ None of:
1. ☒ Certified copies of the priority documents have been received.
2. ☐ Certified copies of the priority documents have been received in Application No. \_\_\_\_\_.
3. ☐ Copies of the certified copies of the priority documents have been received in this National Stage application from the International Bureau (PCT Rule 17.2(a)).

\* See the attached detailed Office action for a list of the certified copies not received.

#### Attachment(s)

- |   |   |
|---|---|
| 1) <input checked="" type="checkbox"/> Notice of References Cited (PTO-892)   | 4) <input type="checkbox"/> Interview Summary (PTO-413)<br>Paper No(s)/Mail Date. _____ |
| 2) <input type="checkbox"/> Notice of Draftsperson's Patent Drawing Review (PTO-948)  | 5) <input type="checkbox"/> Notice of Informal Patent Application (PTO-152)             |
| 3) <input checked="" type="checkbox"/> Information Disclosure Statement(s) (PTO-1449 or PTO/SB/08)<br>Paper No(s)/Mail Date <u>07/24/02; 10/01/02; 05/17/05; 06/01/05</u> | 6) <input type="checkbox"/> Other: _____  |

## DETAILED ACTION

### *Claim Rejections - 35 USC § 103*

The following is a quotation of 35 U.S.C. 103(a) which forms the basis for all obviousness rejections set forth in this Office action:

(a) A patent may not be obtained though the invention is not identically disclosed or described as set forth in section 102 of this title, if the differences between the subject matter sought to be patented and the prior art are such that the subject matter as a whole would have been obvious at the time the invention was made to a person having ordinary skill in the art to which said subject matter pertains. Patentability shall not be negated by the manner in which the invention was made.

1. Claims 1-4 rejected under 35 U.S.C. 103(a) as being obvious over Sugino et al. U.S. Patent 5,694,515 in view of Goodson et al. U.S. Patent 5,809,085.

The applied reference has a common inventor with the instant application. Based upon the earlier effective U.S. filing date of the reference, it constitutes prior art only under 35 U.S.C. 102(e). This rejection under 35 U.S.C. 103(a) might be overcome by: (1) a showing under 37 CFR 1.132 that any invention disclosed but not claimed in the reference was derived from the inventor of this application and is thus not an invention "by another"; (2) a showing of a date of invention for the claimed subject matter of the application which corresponds to subject matter disclosed but not claimed in the reference, prior to the effective U.S. filing date of the reference under 37 CFR 1.131; or (3) an oath or declaration under 37 CFR 1.130 stating that the application and reference are currently owned by the same party and that the inventor named in the application is the prior inventor under 35 U.S.C. 104, together with a terminal disclaimer in accordance with 37 CFR 1.321(c). This rejection might also be overcome by showing

Art Unit: 2631

that the reference is disqualified under 35 U.S.C. 103(c) as prior art in a rejection under 35 U.S.C. 103(a). See MPEP § 706.02(I)(1) and § 706.02(I)(2).

Regarding claim 1, Sugino et al. invention is directed to a signal discrimination circuit for discriminating between a voice signal and a voice band data signal that is transmitted over a telephone network. Figure 4 illustrates an embodiment of a signal discrimination circuit, which includes:

- a voice/data discrimination unit 60, and a tone detection unit 52. The tone detection unit corresponds to the claimed first detection means for detecting a tone signal of a specific frequency from the input signal.
- Sugino et al. does not expressly teach a second detection means as set forth in the claim. However, in column 18, lines 15-32, Sugino et al. teaches in the third embodiment that while the discriminated result output signal 53 causes the output S11 to be set to the value "0" (voice signal) when the output S10 of the tone detection unit 52 is held at the value "1" (tone signal is detected). The aforementioned corresponds to the claimed limitations "when said specific signal has not been detected, a signal discrimination result in the case of said tone signal being detected is made to be a voice state". Sugino et al. further teaches that when a tone signal input to the signal discrimination circuit is part of the signal transmitted during the MODEM communication, it is possible to effectively prevent the signal discriminated result from becoming the

voice signal. The foregoing teachings address the claimed limitations

"when said specific signal has been detected, a signal discrimination result in the case of said tone signal being detected is not made to be a voice state".

- Goodson et al. invention is directed and method are provided for a data communications device to detect and discriminate various amplitude modulated signals, such as ANS signal of the ITU V.25 protocol and an ANSam signal of the ITU V.8 protocol. In figure 4, Goodson et al. discloses the implementation of ANS detector 205 and the ANSam detector 206 in a data communications equipment (DCE); see column 4, line 15 via column 5 line 35. In column 2, line 60 via column 3 line 15, ANS signal and ANSam signal under various protocols, each of these defined signals has predetermined, defined characteristics, and are transmitted during the initial communication period, corresponding to the start-up procedure of a modem as appreciated by one of ordinary skill in the art. According to Goodson et al. teachings, the ANS detector 205 and the ANSam detector 206 as shown in figure 4 can detect and discriminate the ANS signal and ANSam signal. As suggested by Sugino et al. teachings that the signal discrimination circuit can detect a tone during the MODEM communication and can prevent the signal discriminated result from becoming the voice signal, it would have been obvious for one of ordinary skill in the art at the time of the invention that

Sugino et al. signal discrimination circuit can be modified to include either ANS detector 205 or the ANSam detector 206 as taught in Goodson et al. invention. The ANS detector 205 or the ANSam detector 206 corresponds to the claimed second detection means as claimed in the application claim. Motivation is in column 8, lines 55-65, Sugino et al. suggests that it is possible to detect the tone signal with the single frequency or the tone signal with the dual frequencies by using a characteristic in which the difference is reduced.

Regarding claim 2, Goodson et al. teachings include the initial communication period of V.34.

Regarding claim 3, Goodson et al. teachings include the initial communication period of V.8.

Regarding claim 4, Goodson et al. teachings include ANSam detector 206 for detecting the ANSam signal in the initial communication period of V.8.

2. Claims 5-6, 13 and 23 are rejected under 35 U.S.C. 103(a) as being unpatentable over Sugino et al. U.S. Patent 5,694,515 and Goodson et al. U.S. Patent 5,809,085 as applied to claim 1 above, and further in view of admitted prior art of figure 15 in the original disclosure.

Art Unit: 2631

Regarding claim 5, Sugino et al. does not disclose a third detection means for detecting a tone signal of a specific frequency from the input signal.

Admitted prior art of figure 15 teaches a digital circuit multiplication equipment (DCME), includes a voice/data discrimination portion 2, a 2100Hz detection portion 3, and a 2400Hz detection portion 3. The 2100Hz detection portion 3, and 2400Hz detection portion 3 are tone detector for specific frequencies from the input signal. Sugino et al. and admitted prior art are in the same field of endeavor. Furthermore, in column 8, lines 55-65, Sugino et al. suggests that it is possible to detect the tone signal with the single frequency or the tone signal with the dual frequencies by using a characteristic in which the difference is reduced. Therefore, it would have been obvious for one of ordinary skill in the art at the time of the invention that Sugino et al. signal discrimination circuit can be modified to include 2400Hz detection portion as disclosed in figure 15 of prior art. Motivation is Sugino et al. suggests that it is possible to detect the tone signal with the dual frequencies as recited above.

Regarding claim 6, the tone detector in Sugino et al. invention can detect a tone signal of 2100Hz; see column 19, lines 5-25.

Regarding claim 13, admitted prior art, figure 15, discloses a 2400Hz detection portion 4.

Art Unit: 2631

Regarding claim 23, admitted prior art of figure 15 encoding portion 21 for encoding signal input at one of various bit rates (see page 5 of the original disclosure); frame assembling portion 22 for transmitting encoded data; frame disassembling portion 32 for receiving encoded data sent by an opposed encoding means; and a decoding portion for decoding the encoded data received from frame disassembling portion 32.

### ***Allowable Subject Matter***

3. Claims 7-12 are objected to as being dependent upon a rejected base claim, but would be allowable if rewritten in independent form including all of the limitations of the base claim and any intervening claims.

4. Claims 14-22 are allowed.

The following is a statement of reasons for the indication of allowable subject matter:

Regarding claim 14, claim is allowable over prior art of record because the cited references either singularly or in combination cannot teach or suggests a signal discrimination method including "a third step of setting a specific signal detection flag when said specific signal detected".

### ***Conclusion***



Art Unit: 2631

5. The prior art made of record and not relied upon is considered pertinent to applicant's disclosure.

Saito U.S. Patent 5,295,223 discloses "Voice/Voice Band Data Discrimination Apparatus".

Bremer et al. U.S. Patent 5,311,578 discloses "Technique For Automatic Identification Of A Remote Modem".

Greszczuk U.S. Patent 4,931,250 discloses "Multimode Modem".

Goldstein U.S. Patent 5,317,594 discloses "Systems For And Method Of Identifying V.Fast Modem Within Existing Automatic Interworking Procedure Standards".

Kawaguchi U.S. Patent "Communications Data Terminal Capable Of Performing A plurality of Communication Controls.

6. Any inquiry concerning this communication or earlier communications from the examiner should be directed to Khanh Tran whose telephone number is 571-272-3007. The examiner can normally be reached on Monday - Friday from 08:00 AM - 05:00 PM.

If attempts to reach the examiner by telephone are unsuccessful, the examiner's supervisor, Mohammad Ghayour can be reached on 571-272-3021. The fax phone number for the organization where this application or proceeding is assigned is 703-872-9306.

Art Unit: 2631

Information regarding the status of an application may be obtained from the Patent Application Information Retrieval (PAIR) system. Status information for published applications may be obtained from either Private PAIR or Public PAIR. Status information for unpublished applications is available through Private PAIR only. For more information about the PAIR system, see <http://pair-direct.uspto.gov>. Should you have questions on access to the Private PAIR system, contact the Electronic Business Center (EBC) at 866-217-9197 (toll-free).

KCT

*Pham Cong Tran*

06/22/2005

Examiner KHANH TRAN